

**TENNESSEE DEPARTMENT OF REVENUE  
LETTER RULING #06-07**

**WARNING**

**Letter rulings are binding on the Department only with respect to the individual taxpayer being addressed in the ruling. This presentation of the ruling in a redacted form is informational only. Rulings are made in response to particular facts presented and are not intended necessarily as statements of Department policy.**

**SUBJECT**

Whether patterns used to make sand molds for cast metal products are exempt as industrial machinery.

**SCOPE**

This letter ruling is an interpretation and application of the tax law as it relates to a specific set of existing facts furnished to the department by the taxpayer. The rulings herein are binding upon the Department and are applicable only to the individual taxpayer being addressed.

This letter ruling may be revoked or modified by the Commissioner at any time.

Such revocation or modification shall be effective retroactively unless the following conditions are met, in which case the revocation shall be prospective only:

- (A) The taxpayer must not have misstated or omitted material facts involved in the transaction;
- (B) Facts that develop later must not be materially different from the facts upon which the ruling was based;
- (G) The applicable law must not have been changed or amended;
- (D) The ruling must have been issued originally with respect to a prospective or proposed transaction; and
- (E) The taxpayer directly involved must have acted in good faith in relying upon the ruling; and a retroactive revocation of the ruling must inure to the taxpayer's detriment.

**FACTS**

[TAXPAYER] is a metal casting foundry supplying cast metal products in [CERTAIN INDUSTRIES]. The facility is located in Tennessee. The wooden patterns are an essential and integral piece of their manufacturing process. The metal castings supplied

by [TAXPAYER] are produced through a process that is one repetitive integrated system. The pattern itself is a wooden box containing a replica of the casting to be produced. A single pattern is used to create multiple sand molds. Sand and binder are mixed together and poured into the wooden pattern in order to create a sand mold. After the binder sets, the sand mold is extracted from the wooden pattern and becomes the component in which the molten metal is poured into in order to create the final shape of the product to be sold. Although the wood pattern does not contact the resultant iron or steel casting directly, it is impossible to make the metal casting without the pattern. The wood patterns are continuously required in the production process to create a dimensionally correct impression in the sand mold for the liquid metal to be poured into in order for it to solidify to the correct dimensions. After the metal casting has solidified, the sand mold is broken apart. The sand from the broken mold is collected and some or all of the sand is re-used. The wooden pattern is used over and over again to make a sand mold each time a new unit of the taxpayer's product is fabricated.

### ISSUE

Are the wooden patterns used to create sand molds considered "necessary to and primarily for" the fabrication of the taxpayer's product for the purposes of the industrial machinery exemption from sales and use taxes?

### RULING

Yes. Patterns used to create sand molds are "necessary to and primarily for" the manufacture of tangible personal property for purposes of the industrial machinery exemption from sales and use taxes.

### ANALYSIS

Prior to 1984, the industrial machinery exemption applied only to machinery which was "directly and primarily" used in the manufacturing process. "Directly" was defined by the Tennessee Supreme Court as "in direct contact with, and without the intervention of any person or thing." *Phillips & Buttorff Mfg. Co. v. Carson*, 217 S.W.2d 1, 5 (Tenn. 1949); *Woods v. General Oils, Inc.*, 558 S.W.2d 433, 436 (Tenn. 1977). For example, in *Azcon Corporation v. Olsen*, 1983 Tenn. LEXIS 619 (Tenn. 1983), the taxpayer processed scrap metal into steel bars. Exempt items included certain cranes and loaders which came into direct contact with the scrap metal, either in transporting and feeding it into the shredder or in receiving it as it emerged. *Id.* However, a loader which removed debris from the shredder was not industrial machinery. *Id.* The *Azcon* court held that exempt items must be used in the actual fabrication or processing of a product for resale, and the fact that the machinery may be important, even essential, to a continuous operation was not the proper test. *Id.* In another case involving taxes paid between 1981 and 1983, the Tennessee Supreme Court held that drills and explosive loading vehicles were exempt because they operated directly upon the minerals to be mined. *Jersey Miniere Zinc Co. v. Jackson*, 774 S.W.2d 928, 930 (Tenn. 1989).

It is no longer required that every exempt item come into direct contact with the raw material being physically transformed into a finished product. In 1984, the legislature broadened the industrial machinery exemption. In addition to other changes, the legislature removed the language requiring that exempt machinery be “directly used” in the manufacture of tangible personal property, substituting instead the requirement that it be “necessary to” the manufacturing process. 1984 Tenn. Pub. Acts 762. The apparent purpose of the change was to replace the old direct contact test the court in *Azcon* said could exclude even essential machinery for manufacturing with a more relaxed requirement.

Tenn. Code Ann. § 67-6-102(a)(19)(A) now defines industrial machinery as:

Machinery, apparatus and equipment with all associated parts, appurtenances and accessories . . . necessary for operation and maintenance, repair parts and any necessary repair or taxable installation labor therefor, which is **necessary to, and primarily for**, the fabrication or processing of tangible personal property for resale and consumption off the premises, or pollution control facilities primarily used for air pollution control or water pollution control, where the use of such machinery, equipment or facilities is by one who engages in such fabrication or processing as one's principal business . . . (Emphasis added).

The wooden patterns are equipment that is “necessary to” the fabrication of cast metal products because the patterns are necessary to create the sand molds. The sand molds are used to shape the molten metal into their final shape as finished products. Without the wooden patterns, it would be impossible to create the sand molds that are essential to the metal casting. Moreover, the sand mold is broken apart after the metal casting has solidified. Thus, the wooden pattern is an integral part of the manufacturing process of making each and every individual unit of the taxpayer’s product. The wooden patterns have no other use and are used only to create sand molds, therefore, they also fulfill the “primarily for” requirement. Accordingly, the wooden patterns used to create sand molds are “necessary to and primarily for” the manufacture of tangible personal property for purposes of the industrial machinery exemption from sales and use taxes. Assuming that all other requirements for the exemption are met, the wooden patterns would be exempt as industrial machinery.

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APPROVED: Loren L. Chumley  
Commissioner

DATE: 4/7/06

